BLOW-THRU Boost Tube for WRX/STI Front Mount Intercooler

2015-01-30

Thank you for purchasing this PERRIN product for your car! Installation of this product should only be performed by persons experienced with installation of aftermarket performance parts and proper operation of high performance vehicles. If vehicle needs to be raised off the ground for installation, the installer must use proper jacks, jack-stands and/or a professional vehicle hoist for safety of the installer and to protect property. If the vehicle is lifted improperly, serious injury or death may occur! Please read through all instructions before performing any portion of installation. If you have any questions, please contact our tech department prior to starting installation. We can be reached in any of the following methods:

Email Tech@PERRINperformance.com
Instant Chat off the main page of www.PERRINperformance.com
Or simply call our tech team at 503-693-1702

GENERAL MODIFICATION NOTE

Modifications to any vehicle can change the handling and performance. As with any vehicle extreme care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers. Always wear seat belts, and drive safely, recognizing that reduced speeds and specialized driving techniques may be required. Failure to drive a vehicle safely may result in serious injury or death. Do not drive a vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Some modifications (and combinations of modifications) are not recommended and may not be permitted in your state or country. Consult the owner's manual, service manual, instructions accompanying these products, and local laws before purchasing and installing these modifications. You are responsible for the legality and safety of the vehicle you modify using these components.

The Blow-Thru Boost Tube requires an ECU recalibration in order to be installed and run properly on your vehicle. The Blow-Thru Boost Tube is intended for use on Subarus which are using aftermarket turbo chargers that can "outflow" the stock intake system.

The Blow-Thu Boost Tube has a BigMAF built into it. This is designed to do two things:
1. Allow your ECU to accurately measure airflow above and beyond what the stock intake can measure. This wider range of MAF readings allow for more resolution in the fuel and timing mapping so the engine can be safely tuned for Wheel Horsepower ratings up to 500WHP.

2. It is sized specifically to offset the use of 800cc fuel injectors. When tuning your ECU, this scaling effect will allow other settings to remain the same as though you were using the stock injector size. This lets other internal parameters in the ECU work better so the car runs smoother.

Tuning Guidelines

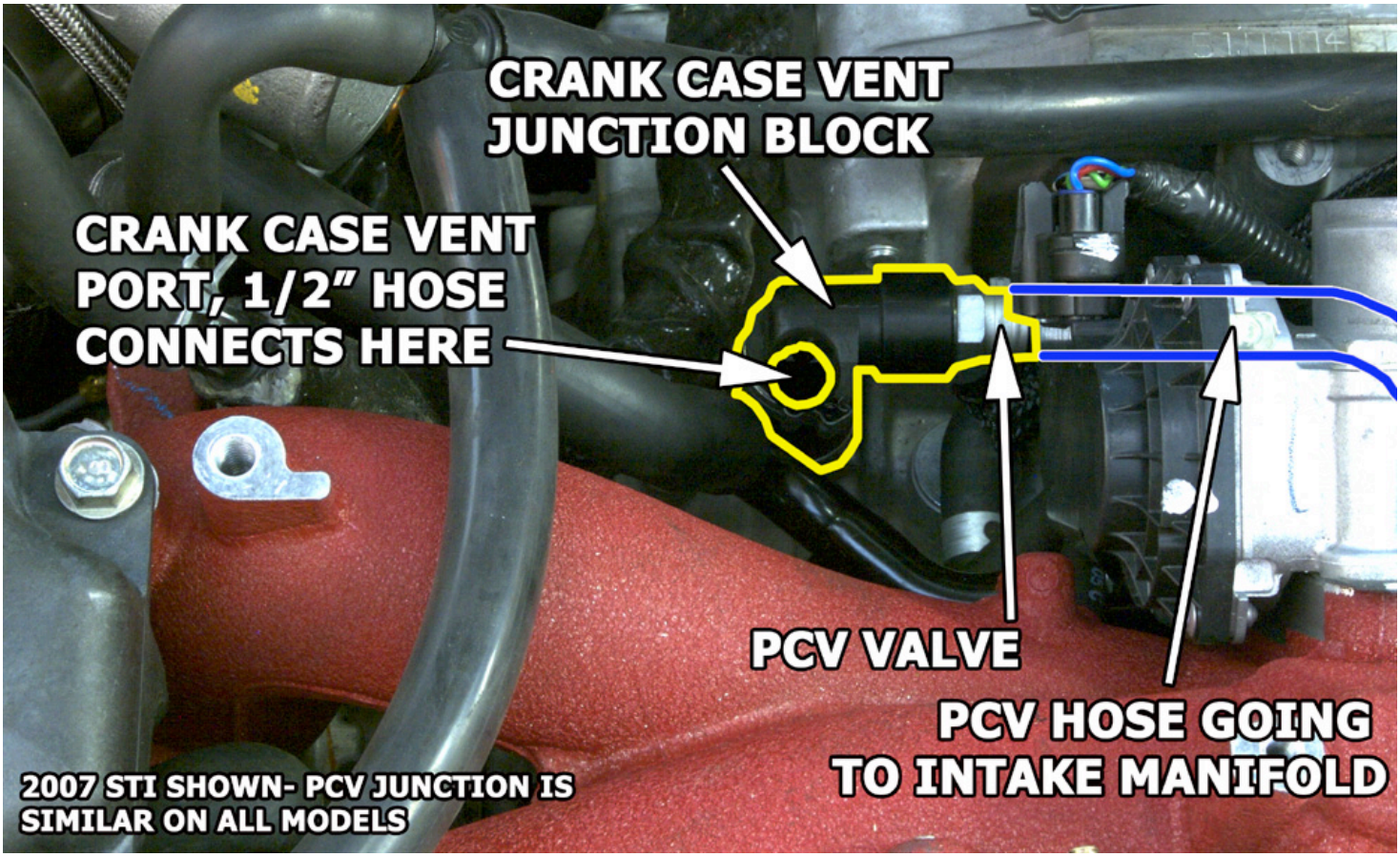
One method of tuning the Blow-Thru Boost tube (w/ BigMAF) is to not change the ECU's injector size to 800cc(or your actual injector size). The increased size of the BigMAF sized housing will offset the larger sized injectors. Leave the scaling and injector size at stock settings with only minor changes to the injector size setting to get the idle and light throttle fuel corrections set. Then start with tuning the MAF curve to hit your AFR Targets. Also keep in mind that this will effect engine load by dropping it down about 25% which means you will need to rescale the timing tables and dynamic advance tables.
The other method involves changing the injector size to 800cc(or your actual injector size), rescaling the entire MAF curve by adding roughly 20% across the whole thing. This is just a starting point and requires lots of time dialing in the entire curve to ensure low RPM drivability is good, as well as full throttle fueling is correct. This method takes longer to dial in, but allows for other timing maps to be left along as the engine load isn't offset.

PARTS INCLUDED WITH BLOW-THRU BOOST TUBE:

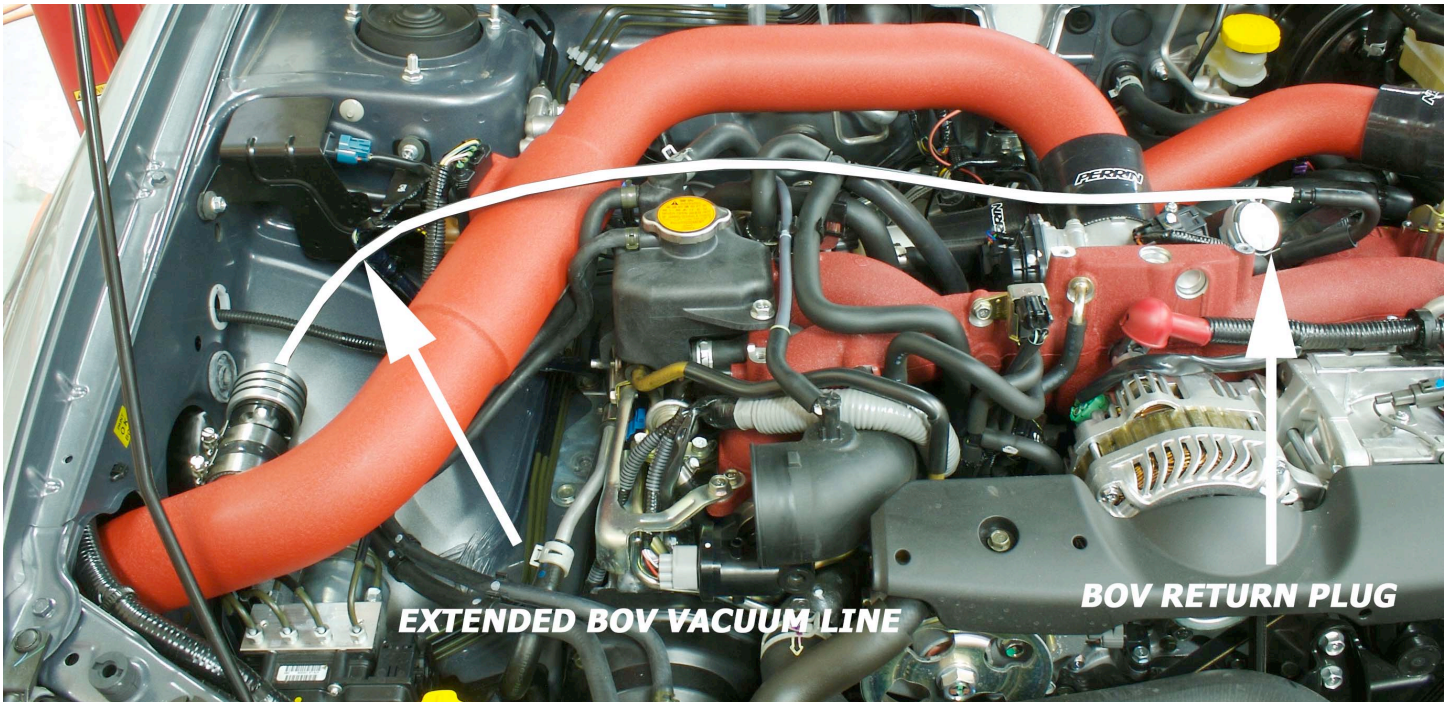
- **(1) PERRIN Blow-Thru Boost Tube**
- **(1) 1/4" Connector Fitting**
- **(2) Vacuum Caps**
- **(2) M4 Screws for MAF Sensor (m4x10mpp-ss)**
- **(4ft) 5/32" Vacuum Hose**
- **(1) 2.75" Polished Aluminum Coupler**
- **(1) 3" Polished Aluminum Coupler**
- **(1) Aluminum BOV Plug**

INSTALLATION

1) Remove PERRIN 2.75" long FMIC boost tube from car, along with BOV, and BOV tube connection.
2) Remove BOV and Coupler from boost tube. Make sure to keep all clamps and couplers as these will be reused.
3) Remove intake system from car, and remove MAF sensor from MAF housing.
4) Install BOV plug into BOV return hose, and make sure to use OEM clamp. Long pliers will aid in installation.
5) Locate PCV valve and PCV intake manifold fitting. **These both need to be capped off, using supplied vacuum caps**. Because we are relocating the MAF sensor, to the boost tube, the PCV valve will create an air leak. **It is very important that the PCV be capped off, or it might be difficult to tune the ECU**. This hose that has to be capped off is indicated in blue below.



6) Install 1/4" reducer fitting into OEM BOV vacuum hose. This will be used to extend hose to passenger side of car.
7) Install 5/32" vacuum hose to 1/4" reducer fitting, and route to passenger side of car.
8) Install MAF sensor into boost tube using supplied M4 screws. Tighten using small Phillips screwdriver.
9) Install Blow-Thru boost tube into car, using existing couplers and clamps. Tighten clamps using 8mm nut driver.
10) We highly recommend the use of an aftermarket BOV with special spring installed. Using existing BOV boost hose and clamps, install BOV to boost tube.
11) Start car and check for vacuum leaks before tuning. If VTA BOV is installed, you will notice the piston being open at idle. This is completely normal. If car checks out, tune car immediately before test-driving.



COMMON QUESTIONS:

- My car doesn't start? Check all vacuum connections and boost tube connections. Lastly check that the MAF sensor is pointed the right direction on the intake system. The plug should be facing the front of the car.
- My boost tubes keep blowing off? Make sure clamps are placed behind the bead on the tube when tightening. This will ensure that if clamps are tight enough they can't pop off. A small amount of blow-by will produce oil in the boost tubes. If this gets between the tubing and the coupler, this can also cause the boost tubes to pop off. Lastly, make sure that the hose clamps are tight enough and recheck periodically.

Questions, Comments and Suggestions Contact: Tech@PERRINperformance.com
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